

4. ENVIRONMENTAL CONSEQUENCES

Potential environmental impacts that could result from the proposed title transfer of ETTP land and facilities were evaluated for the following: land and facility use, air quality, water resources, ecological resources, cultural resources, socioeconomics, utilities, noise, and health and safety. Potential impacts identified were compared with the results of the analysis conducted in the 1997 EA. Land and facility use, threatened and endangered (T&E) species, cultural resources, socioeconomics, utilities, and health and safety impacts are discussed below, either because of changes that have occurred since completing the 1997 EA, or because of potential impacts that could result from the proposed action. The other impacts have not changed. Appropriate restrictions would be included in the Quitclaim Deed to provide for environmental protection and to ensure that activities by the new owner(s) do not adversely affect any sensitive resources (i.e., cultural resources).

4.1 LAND AND FACILITY USE

DOE's PMP (DOE 2002a) presents a modified reindustrialization approach that is part of the accelerated closure of ETTP. The modified approach would focus only on certain target facilities. If the title is not transferred for a target facility prior to its scheduled deactivation date, then the facility would be enter the decontamination and demolition program.

The uses of title-transferred facilities would still be limited to those bounded in the 1997 EA, which could include metals recycling and fabrication; industrial services (e.g., laundry); administrative support services; laboratory services; warehousing; technology research, testing, and demonstration; waste management, including recycling, waste treatment, and waste packaging; metals smelting and machining; manufacturing (including the use of uranium enrichment technology); and general office space. The majority of these uses would conform to the City of Oak Ridge Zoning Ordinance (Article VIII, Sect. 8.02 IND-2, Industrial Districts). Certain uses (e.g., waste management, smelting, and heavier manufacturing) could be required to conform to the IND-3, Industrial Districts zoning requirements (Article VIII, Sect. 8.03). It is expected that the uses of certain facilities would remain unchanged upon title transfer (i.e., offices, utilities, certain roads/ parking/loading areas, and the railroad), while others may undergo modifications. New facilities are likely to be constructed on transferred land parcels.

Although the six additional areas described in Sect. 3.1 could continue to be leased, it is possible that portions of Areas 1, 3, 4, and 6 could be transferred in the future. Areas located within a floodplain, or with wetlands or other sensitive resources (e.g., Area 2), or containing waste disposal areas (e.g., Area 5) would be excluded from title transfer.

The total amount of land that would actually be transferred is unknown at this time. However, for analysis purposes about 1600 of the 2200 total acres (see Sect. 3.1) are assumed for eventual title transfer. Of this, approximately 30% of the 1600 acres (i.e., 500 acres) is assumed to be suitable for development purposes. This amount includes the approximately 100 acres associated with the facilities listed in [Table 2.1](#), another 100 acres for Parcels ED-4 and ED-5, and about 70 acres that include portions of Areas 3, 4, and 6. The remainder of the 500 acres would include the areas of remediated land within ETTP that have not yet been identified. The analysis also assumes that the remaining acreage would not be suitable for development because of various constraints (e.g., wetlands and floodplains, land with greater than 15% slope, utilities, etc.).

4.2 THREATENED AND ENDANGERED SPECIES

No impacts to any T&E species are expected from the title transfer of ETTP land and facilities. No listed species are known to occur within the developed areas of ETTP. Because of the previously disturbed nature of the vacant land parcels that could potentially be transferred and their proximity to the developed industrial areas, it is also unlikely that any listed species are present.

The FWS was notified about the proposed action on October 2, 2002. FWS provided a response back on November 20, 2002, and requested that DOE provide further information on the proposed action and that they prepare a BA to assess potential impacts and determine if the action could affect the federally listed gray bat, Indiana bat, and spotfin chub. DOE completed the BA, concluded that the proposed title transfer is not likely to adversely affect any of the listed species, and submitted it to the FWS. Based on the conclusion in the BA that none of the species appear likely to be present within, or in, the immediate vicinity of ETTP, and proposed or designated critical habitats for the species are not present on, or near, the project area, the FWS determined that the BA was adequate and supports the conclusion of “not likely to adversely affect”. The FWS also stated that obligations under Sect. 7 of the Endangered Species Act must be reconsidered if: (1) new information reveals that the proposed action may affect listed species in a manner, or to an extent, not previously considered; (2) the proposed action is subsequently modified to include activities that were not considered in the BA; or (3) new species are listed or critical habitat designated that might be affected by the proposed action. Correspondence from the FWS is included in Appendix C and a copy of the BA is included in Appendix D.

4.3 CULTURAL RESOURCES

The Tennessee State Historic Preservation Officer (SHPO) and the Eastern Band of Cherokee Indians Tribal Historic Preservation Office (THPO) were notified about the proposed undertaking. The SHPO provided a response on November 7, 2002 indicating that the proposed action may adversely affect properties that are eligible for listing in the National Register of Historic Places (NRHP). The SHPO also requested that DOE begin consultation with their office.

In response to the SHPO and to ensure that the potential effects of each title transfer are thoroughly considered, consultation would be conducted with the Tennessee SHPO on a proposal-by-proposal basis, as necessary, for those resources that are listed in or eligible for inclusion in the NRHP. DOE would require a determination of effect on identified NRHP-included or -eligible properties. If an adverse impact were determined, procedures would be developed and any required mitigation measures needed to address the adverse impacts, would be conducted. These activities would require approval from the SHPO and possible review by the Advisory Council on Historic Preservation.

DOE would include appropriate deed restrictions to ensure that any adverse impacts on cultural resources would be avoided to the extent practicable. The deed between DOE and the new property owner(s) would also require that if an unanticipated discovery of cultural materials (e.g., human remains, pottery, bottles, weapon projectiles, and tools) or sites is made during any development activities, all ground-disturbing activities in the vicinity of the discovery would be halted immediately. The property owner would be responsible for contacting the SHPO and the Eastern Band of Cherokee Indians THPO to initiate and complete consultation prior to any further disturbance of the discovery-site area.

On February 4, 2003, the SHPO provided a letter to DOE stating that based on their review of additional information provided by DOE, they concur that the proposed project will not adversely affect any listed properties on the NRHP as long as the above conditions are met. Copies of correspondence with the SHPO and THPO are included in Appendix C.

4.4 SOCIOECONOMICS

The socioeconomic evaluation in the EA Addendum is intended to assess the potential impacts from transferring ETTP land and facilities versus the potential impacts that were evaluated for the leasing action in the 1997 EA. For this reason, the economic effectiveness of CROET's and Heritage Center LLC's operations is not within the scope of the EA Addendum. Under the current lease, the City of Oak Ridge can only tax improvements made by Heritage Center LLC or its subleases. Since Heritage Center LLC is a not-for-profit organization, they cannot be taxed. With title transfer, facilities could be sold and the property and improvements by the new owners would be subject to property and sales taxes. This would indicate that title transfer should be more advantageous to the community (in terms of tax revenue) than the current leasing arrangement.

It was determined that the majority of the bounding socioeconomic impact analysis conducted for the 1997 EA was still valid for the current proposed action. This determination is based on the estimate of direct and indirect jobs created and the minor demographic changes that have occurred. The additional socioeconomic impacts of title transfer of ETTP land and facilities are limited to the potential revenue impacts for the City of Oak Ridge and Roane County if title transfer is to private, tax-paying corporations. The demographic, employment, and income impacts are essentially unchanged. No environmental justice impacts are expected, since the locations of minority and low-income populations remain unchanged. Little if any net in-migration is expected as a result of the proposed action. Therefore, little or no impact on demand for housing or other public services (e.g., schools, utilities, police and fire protection) is anticipated.

There are two potential changes in local revenue as a result of title transfer: (1) additional tax revenue as property becomes taxable, and (2) loss of DOE PILT on any acreage transferred. It should be noted that initially mostly facilities would be transferred and therefore the actual amount of acreage would be small. Transfer of the majority of the land parcels, including remediated areas, would not begin until the 2006-2007 timeframe or later depending on the actual completion of remedial actions. Therefore, initially, the difference in the PILT would be minor. While DOE owns the land and buildings they are not taxable, but leasehold improvements made by tenants are taxable (Young 2002). Therefore, only the land itself and any buildings transferred with the land represent a potential new source of revenue. Moreover, only land eventually sold to private corporations is likely to become taxable; transfer to Heritage Center LLC is unlikely to change the property's tax status (Young 2002). As a result, the net change in revenue to the city would be the tax collected on land and improvements sold to for-profit organizations, minus any lost revenues from discontinued PILT.

The total amount of land that Heritage Center LLC would be able to sell is unknown at this time. Nationwide experience with brownfield sites suggests that even after remediation, these sites are more difficult to market and develop than comparable sites with no history of contamination (United States Conference of Mayors 2000). The Conference of Mayors defines a brownfield site as one in which redevelopment is complicated by either real or perceived environmental contamination. The amount of land sold would depend on the final size of the parcels transferred, the proportion of the land considered developable after remediation, and on other market factors.

For the purposes of this analysis, it is assumed that approximately 1600 acres would be transferred (see Sect. 4.1). The analysis also assumes that the entire 1600 acres would be transferred at one time. However, the actual transfers would likely be phased over a yet to be determined time period. If Heritage Center LLC retains ownership of all of the land and existing buildings, then there would be no change in the tax status, and the net result of the transfer is the annual loss of the PILT. For 1600 acres, this would amount to roughly \$61,000 in 2003 (1600 acres valued at \$5,327/acre \times 25% assessment rate \times \$2.87 per \$100 assessed value) (Heiskell 2002). The amount for Roane County would be approximately \$56,000 at the current tax rate of \$2.64 per \$100 assessed value (RCCC 2003). It should be noted that tax revenue would be generated on improvements made to the property regardless of whether it is leased to Heritage Center LLC or the title is transferred.

The analysis in Section 4.1 also assumes that about 500 out of the 1600 acres potentially transferred would eventually be suitable for development. The city and county would collect maximum tax revenue if Heritage Center LLC sells all of the 500 acres to tax-paying corporations. Unimproved Oak Ridge industrial land has been valued from \$17,000 to \$35,000 per acre (FLUOR 2001). The total land value for 500 acres would fall between \$8.5 million and \$17.5 million, and the assessed value between \$3.4 million and \$7.0 million. At \$2.87 per \$100 assessed value (McCoy 2003) that would result in roughly \$98,000 to \$201,000 in tax revenue for the City of Oak Ridge. Subtracting the \$61,000 in lost revenue from discontinued DOE PILT suggests that net new city revenue could range from \$37,000 to \$140,000 (\$98,000 minus \$61,000 to \$201,000 minus \$61,000). Using the same assumptions, Roane County could receive \$89,000 to \$184,000 in tax revenue. Subtracting \$56,000 in lost PILT revenues suggests that net new revenue for Roane County could range from \$33,000 to \$128,000. Any improvements made to the land would further increase the net gain to both the city and the county. A recent analysis estimated that the value of improved industrial land can range from 8 to 15 times its unimproved value (ORNL 2002). Actual revenues would depend on the acreage transferred, the amount of property sold, the types of improvements made, and on future land valuations, assessments, and tax rates.

4.5 UTILITIES

It is anticipated that the existing ETPP Water Treatment Plant (K-1515) would be transferred and continue to provide service to the remaining facilities. Transferred facilities would also tie into other existing and new utility infrastructure (i.e., electrical, gas, communications, sewer). Some new utility infrastructure construction is expected in order to provide utility service to new facilities that may be built. Other upgrades and modifications may also be needed. The City of Oak Ridge is currently designing a new package wastewater treatment plant for Rarity Ridge, which will serve that development. The City is also constructing a new, elevated water tank and associated water infrastructure to serve the Rarity Ridge development from the neighboring public water supplies of the Cumberland Utility District and the City of Kingston. It is possible that these systems could also be configured to accommodate future development located at the Heritage Center. Installation of utility improvements consistent with ETPP plans and coordinated (as applicable) with the City of Oak Ridge would be expected to occur.

4.6 HEALTH AND SAFETY

Health and safety impacts under the proposed action are expected to be similar to those addressed in the 1997 EA. It is expected that commercial businesses and industries would have occupational hazards, emissions, and effluents common to other industrial sites. These businesses and industries would be required to follow appropriate environmental regulations and obtain applicable permits that are intended to protect human health and the environment.

Construction workers would be subject to typical hazards and occupational exposures faced at other industrial construction sites. Falls, spills, vehicle accidents, confined-space incidents, and injuries from tool and machinery operation could occur. Similar hazards also would be present during industrial operations. Workers would be expected to receive applicable training, be protected through appropriate controls and oversight, and follow standard industrial and protective engineering practices, including the use of personal protective clothing and equipment, as specified in applicable Occupational Safety and Health Act of 1970 regulations (e.g., 29 *CFR* 1910 and 29 *CFR* 1926).

For industries that could handle radioactive material (e.g., radioactive waste treatment and metals decontamination/recycling), no unique radiological emissions would be anticipated. The Nuclear Regulatory Commission and/or TDEC Division of Radiological Health would regulate and inspect these facilities for compliance with the terms and conditions of their radioactive materials licenses.